

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

The problem addressed by the instant method is to provide a method of producing caprolactam of high purity in an energy-efficient manner.

This problem is solved according to the invention in that a process is provided wherein, after removing ammonia and water, an inorganic acid is added to a crude caprolactam comprising caprolactam, ammonia, water, high boilers and low boilers during distillation, in the presence of a catalyst, and passing a stream from a first distillation apparatus C1 to a second distillation apparatus C2 and then a stream from C2 to a third distillation apparatus C3.

In the closest prior art, WO 01/90065, sodium hydroxide solution is added downstream of a first distillation device. The crude caprolactam is hydrated and treated with an ion exchanger. In US 5693793 to Ritz et al, another close prior art, the high boilers are treated with phosphoric acid to obtain a reaction effluent, and caprolactam is removed from the reaction effluent and then subsequently worked-up to obtain purified caprolactam. None of the prior art documents discloses adding an inorganic acid to a mixture of caprolactam, high boilers and low boilers, utilizing the claimed two distillation steps without requiring hydration, reaction with the ion exchanger and the reaction with NaOH of the crude caprolactum as in the prior art process.

Thus, the subject matter of claims 1-15 and 17 is neither disclosed by the prior art nor is obvious. The claims are deemed allowable over the prior of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 571-272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on 571-272-1444.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Virginia Manoharan/  
Primary Examiner, Art Unit 1797